a.) Amendment to the Claims:

Claim 1 (Cancelled)

2. (Currently Amended) A polypeptide selected from the group consisting of the following (a) and b):

(a) a polypeptide comprising the amino acid sequence ~~represented by~~ SEQ ID NO:1 or 2,

(b) a polypeptide comprising the amino acid sequence of residues 56 to 359 ~~represented by~~ SEQ ID NO:1 or 2.

Claim 3 (Cancelled)

4. (Currently Amended) A DNA selected from the following (a), (b), (c), (d), (e), (f), (g) and (h):

(a) a DNA encoding the polypeptide according to claim 2 or 51,

(b) a DNA having nucleotides 280 to 1194 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 3,

(c) a DNA having nucleotides 115 to 1194 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 3,

(d) a DNA having nucleotides 1454 to 2368 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 4,

(e) a DNA having nucleotides 1289 to 2368 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 4,

(f) a DNA having nucleotides 460 to 1374 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 5,

(g) a DNA having nucleotides 295 to 1374 ~~of a~~ of the nucleotide sequence ~~represented by~~ SEQ ID NO: 5,

(h) a complement of a DNA hybridizing with DNA selected from (a), (b), (c), (d), (e), (f) and (g) using a filter with colony- or plaque-derived DNA immobilized thereon at 65°C in the presence of 0.7-1.0M of NaCl, followed by washing the filter at 65°C with 0.1 standard concentration of SSC (saline-sodium citrate) solution (one standard concentration of SSC solution consists of 150mM sodium chloride and 15mM sodium citrate), wherein all of said DNA ~~encodes~~ encode a polypeptide having an activity to transfer fucose to an N-acetylglucosamine residue in an N-acetyllactosamine (Gal β 1-4GlcNAc) structure existing in a nonreducing terminus of a sugar chain via an α 1,3-linkage, but not having an activity to transfer fucose to an α 2,3-sialyl N-acetyllactosamine (NeuAc α 2-3Gal β 1-4GlcNAc) structure existing in a nonreducing terminus of a sugar chain via an α 1,3-linkage.

5. (Original) A recombinant DNA obtained by integrating the DNA according to claim 4 into a vector.

6. (Previously Presented) The recombinant DNA according to claim 5 wherein the recombinant DNA is plasmid pAMo-mFT9 or plasmid pBS-hFT9 (S2).

7. (Previously Presented) A non-human transformant or a transformant cell having the recombinant DNA according to claim 5.

8. (Previously Presented) The transformant according to claim 7 or 52, wherein the transformant is selected from the group consisting of microorganisms, animal cells, plant cells, insect cells, non-human transgenic animals, and transgenic plants.

9. (Previously Presented) The transformant according to claim 8, wherein the microorganism belongs to *Escherichia*.

10. (Previously Amended) The transformant according to claim 8, wherein the animal cell is selected from the group consisting of mouse myeloma cells, rat myeloma cells, mouse hybridoma cells, CHO cell, BHK cell, African green monkey kidney cells, Namalwa cell, Namalwa KJM-1 cell, human fetal kidney cells, and human leukemia cells.

11. (Previously Presented) The transformant according to claim 8, wherein the insect cell is selected from the group consisting of *Spodoptera frugiperda* ovarian cells, *Trichoplusia ni* ovarian cells, and silkworm ovarian cells.

12. (Previously Presented) A method for producing a polypeptide according to claims 2 or 51, which comprises the steps of:

culturing in a medium a transformant having a recombinant DNA obtained by inserting a DNA encoding the polypeptide into a vector;

producing and accumulating said polypeptide in said medium; and

isolating said polypeptide from the medium.

13. (Currently Amended) A method for producing a polypeptide according to claim 2 or 51, which comprises the steps of:

feeding a non-human transgenic animal having a recombinant DNA obtained by inserting a DNA encoding the polypeptide into a vector;

producing and accumulating said polypeptide ~~in said medium~~; and

isolating said polypeptide from the animal.

14. (Original) The method for producing the polypeptide according to claim 13, wherein the production and accumulation of said polypeptide is carried out in the milk of said non-human transgenic animal.

15. (Currently Amended) A method for producing a polypeptide according to claim 2 or 51, which comprises the steps of:

growing a transgenic plant having a recombinant DNA obtained by inserting a DNA encoding the polypeptide into a vector;

producing and accumulating said polypeptide ~~in said medium~~; and

isolating said polypeptide from the plant.

16. (Previously Presented) A method for producing a polypeptide according to claim 2 or 51, which comprises the steps of:

using a DNA encoding the polypeptide, and

synthesizing said polypeptide by an *in vitro* transcription-translation system.

17. (Previously Presented) A method for producing a reaction product wherein fucose is added to an N-acetylglucosamine residue in the N-acetyllactosamine structure of an acceptor substrate via an α 1,3-linkage, using a polypeptide selected from a polypeptide according to claim 2 or 51 as an enzyme source, which comprises the steps of:

placing in an aqueous medium (a) said enzyme source, (b) an acceptor substrate selected from (i) N-acetyllactosamine(Gal β 1-4GlcNAc), (ii) oligosaccharides having the N-acetyllactosamine structure in a nonreducing terminus

thereof, (iii) complex carbohydrates having the N-acetyllactosamine structure in a nonreducing terminus of sugar chains, (iv) their derivatives wherein the N-acetyllactosamine structure is modified by sulfate group, and (v) their derivatives wherein the N-acetyllactosamine structure is modified by sugar, but a galactose residue in the N-acetyllactosamine structure is not modified by sialic acid via an α2,3-linkage, and (c) guanosine-5'-diphosphate fucose;

producing and accumulating the reaction product, in the aqueous medium; and

collecting said reaction product from said aqueous medium.

18. (Previously Presented) The method for producing the reaction product according to claim 17, wherein a derivative is selected from sugar chains having, in a nonreducing terminus thereof, any one of the following oligosaccharide structures: Fuc α 1-2Gal β 1-4GlcNAc, Gal α 1-3Gal β 1-4GlcNAc, Gal α 1-3(Fuc α 1-2)Gal β 1-4GlcNAc, GalNAc α 1-3(Fuc α 1-2)Gal β 1-4GlcNAc, Gal α 1-4Gal β 1-4GlcNAc, Gal β 1-4GlcNAc($6SO_3^-$); and complex carbohydrates containing said sugar chains.

Claims 19-23 (Cancelled).

24. (Previously Presented) The production method according to claim 17, wherein the complex carbohydrate is selected from the group consisting of glycoproteins,

glycolipids, proteoglycans, glycopeptides, lipopolysaccharides, peptideglycans and glycosides wherein a sugar chain binds to compounds such as steroids.

Claims 25-50 (Cancelled).

51. (Previously Presented) The polypeptide according to claim 2, wherein the activity of transferring fucose to an N-acetylglucosamine residue in the Gal β 1-4GlcNAc structure existing in a nonreducing terminus of a sugar chain via an α 1,3-linkage is the Lewis x sugar chain [Gal β 1-4(Fuc α 1-3)GlcNAc] and the Lewis y sugar chain [Fuc α 1-2Gal β 1-4(Fuc α 1-3)GlcNAc] synthesizing activity, and the activity of transferring fucose to an N-acetylglucosamine residue in the NeuAc α 2-3Gal β 1-4GlcNAc structure existing in a nonreducing terminus of a sugar chain via an α 1,3-linkage is the sialyl Lewis x sugar chain [NeuAc α 2-3Gal β 1-4(Fuc α 1-3)GlcNAc] synthesizing activity.

52. (Previously Presented) A non-human transformant or a transformant cell having the recombinant DNA according to claim 6.

53. (Previously Presented) The production method according to claim 18, wherein the complex carbohydrate is selected from the group consisting of glycoproteins, glycolipids, proteoglycans, glycopeptides, lipopolysaccharides, peptideglycans and glycosides wherein a sugar chain binds to steroids.

Claims 54-75 (Cancelled).